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**IN THE CLAIMS:**

1. (Currently Amended) A cathode structure comprising:  
a heater including a columnar electric insulating material body and a heating wire  
that is partially buried in the electric insulating material body; and;  
5 a cathode unit disposed at a first end surface of the electric insulating material  
body including a metal cup and a pellet member supported in the metal cup, the pellet member  
containing an electron-emitting material, wherein  
the heating wire leads out from a second end surface of the electric insulating  
material body.
- 10 2. (Original) A cathode structure according to Claim 1, wherein  
the electric insulating material body includes a wall disposed on the second end  
surface so as to surround a position from which the heating wire leads out.
3. (Original) A cathode structure according to Claim 2, wherein  
the wall is disposed around a perimeter of the second end surface,  
15 the second end surface surrounded by the wall rises in a dome shape, and  
the heating wire leads out from a position between the wall and a center of the  
second end surface.
4. (Original) A cathode structure according to Claim 1, wherein  
the electric insulating material body is in a circular columnar shape, and includes  
20 a part that has a greater diameter than that of the second end surface.

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5. (Currently Amended) A cathode structure comprising:

a heater including a columnar electric insulating material body and a heating wire that is partially buried in the electric insulating material body and leads out from a side surface thereof; and

5 a cathode unit disposed at one of ~~an end surfaces~~ surface of the electric insulating material body, and emitting electrons from a surface of the cathode unit when heated by the heater, the cathode unit includes a metal cup and a pellet member containing an electron-emitting material supported in the metal cup, wherein

the electric insulating material body includes a protrusion disposed on the side  
10 surface between a position from which the heating wire leads out and the surface of the cathode unit from which electrons are emitted.

6. (Original) An electron gun including a cathode structure according to Claim 1.

7. (Original) A cathode ray tube including an electron gun according to Claim 6.

8. (Original) An electron gun including a cathode structure according to Claim 5.

15 9. (Original) A cathode ray tube including an electron gun according to Claim 8.

10. (New) A cathode structure according to Claim 1 wherein the electron-emitting material contains barium oxide.

11. (New) A cathode structure according to Claim 1 wherein the electric insulating material body is made of ceramic.

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12. (New) A cathode structure according to Claim 1 wherein further comprising a supporting metal wire attached to the cathode structure between the metal cup and the heater.

13. (New) A cathode structure according to Claim 12 wherein a plurality of supporting metal wires are attached to the cathode structure between the metal cup and the heater  
5 and extend outward from the side of the cathode structure.

14. (New) A cathode structure according to Claim 13 wherein the heater wire is coiled into an S shape when viewed perpendicular to an axis through the cathode structure.

15. (New) A cathode structure according to Claim 1 wherein the columnar electric insulating material body has a trapezoidal cross-sectional shape.

10 16. (New) A cathode structure according to Claim 1 wherein the columnar electric insulating material body has a cylinder shape with a lower extending annular wall surrounding the exit of the heating wire from the second end surface.

17. (New) A cathode structure according to Claim 5 wherein the electron-emitting material contains barium oxide.

15 18. (New) A cathode structure according to Claim 5 wherein the electric insulating material body is made of ceramic.

19. (New) A cathode structure according to Claim 5 wherein further comprising a supporting metal wire attached to the cathode structure between the metal cup and the heater.

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20. (New) A cathode structure for an electron gun comprising:

a metal cylindrical open cup with a columnar pellet mounted in the metal cup, the columnar pellet is contained within an inner diameter of the metal cup and extends above the metal cup to emit electrons;

5 a columnar electric insulating material body includes a heating wire with electrode leads extending from one end of the body; and

a plurality of support wires are attached to the cathode structure between a bottom of the metal cup and a surface of another end of the columnar electric insulating material body, to extend laterally outward from the bottom of the metal cup, wherein heat from the heating wire  
10 is transmitted to the metal cup to enable the columnar pellet to emit electrons, the columnar electric insulating material body has a lower extending annular wall surrounding the electrode leads to suppress the electron emitting material from attaching to the electrode leads.

21. (New) A cathode structure according to Claim 20 wherein barium oxide is the electron emitting material in the columnar pellet, and a surface of the columnar pellet above the  
15 metal cup is covered with an osmium-ruthenium thin film.

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